

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

(DRAFT)

Conditional Major Construction / Operating

Permit: F-08-031

Owensboro Riverport Authority

Owensboro, KY 42301

August 21, 2008

Daniel Hall, Reviewer

SOURCE ID: 21-059-00147

AGENCY INTEREST: 945

ACTIVITY: APE20080003

SOURCE DESCRIPTION:

Owensboro Riverport Authority currently operates a grain and coal barge loading facility under the authority of State Origin Permit # S-07-139 (Revision 1). On July 28, 2008, Owensboro Riverport Authority applied to the Division to add a leaded gasoline unloading operation at its facility located at 2300 Harbor Road in Owensboro, Kentucky. This source also purchased additional grain handling facilities at this location that were originally owned and operated by Owensboro Grain Company, Inc.

The leaded gasoline unloaded at this facility will range in octane rating from 110 to 118, and will be transferred directly from rail cars to tanker trucks. The maximum unloading rate for this operation will be one hundred forty (140) gallons per minute. Once the gasoline is transferred to the tanker trucks, it will be transported off-site. Leaded gasoline will not be stored at this facility. The source does not plan to apply any air pollution control devices (vapor balance system or vapor recovery unit) to the leaded gasoline unloading operation.

The grain handling operations that were purchased from Owensboro Grain Company, Inc. include a headhouse (internal elevator legs/conveyors), a column grain dryer, 3 outdoor storage bins, an on-ground storage pile, a truck receiving pit, and a rail/truck loadout.

COMMENTS:

TYPE OF CONTROL AND EFFICIENCY

Fugitive particulate emissions from the grain handling/processing equipment (loadouts, stockpiles, receiving pits, conveyors, legs, storage bins, etc.) will be controlled by being enclosed or partially enclosed (control efficiency of 90%).

Process particulate emissions from the grain dryer and main truck receiving pit will be controlled by enclosed screens and a cyclone dust collector, respectively (control efficiency of 90%).

Volatile organic compound (VOC) and hazardous air pollutants (HAPs) emissions from the leaded gasoline unloading will be uncontrolled (control efficiency 0%).

EMISSION FACTORS AND THEIR SOURCE

Particulate emission factors for the grain handling/processing operations were obtained from AP-42, Chapter 9.9.1. The barge loading unit at this facility handles both grain and coal. The AP-42 grain handling emission factors were used for this unit, because these factors are more conservative.

Particulate emission factors for the haul roads are the standard factors used by the Kentucky Division for Air Quality's Minerals Section.

The grain dryer's natural gas combustion emission factors were obtained from AP-42, Chapter 1.4.

The volatile organic compound (VOC) emission factor for leaded gasoline unloading was derived from Equation (1) in AP-42, Chapter 5.2. Reference input variables for this equation were obtained from Table 7.1-2 in AP-42, Chapter 7.1. Individual and combined hazardous air pollutant (HAP) emission factors were obtained by multiplying the calculated VOC emission factor by the maximum % concentration of the HAP listed on the leaded gasoline's MSDS sheet.

APPLICABLE REGULATIONS

The column grain dryer and main (large) truck receiving pit emission points are governed by Regulation **401 KAR 59:010**, New process operations.

The remaining grain/coal handling operations (receiving pits, conveyors, elevator legs, storage bins, stockpile, and haul roads) are governed by Regulation **401 KAR 63:010**, Fugitive emissions.

The leaded gasoline unloading emission point is governed by Regulation **401 KAR 63:020**, Potentially hazardous matter or toxic substances.

EMISSION AND OPERATING CAPS DESCRIPTION:

Owensboro Riverport Authority voluntarily proposed a one million (1,000,000) gallons per year (rolling twelve (12) month total) throughput limit for the leaded gasoline unloading operation to limit the sources potential to emit (PTE) for: volatile organic compounds (VOCs) below ninety (90) tons per year; individual hazardous air pollutants (HAPS): methyl tertiary-butyl ether (MTBE), toluene, xylene, and hexane below nine (9) tons per year, each; and combined hazardous air pollutants (HAPs) below twenty-two and one half (22.5) tons per year. Compliance with the permit limit will preclude applicability of State Regulation 401 KAR 52:020, Title V permits.

PERIODIC MONITORING:

Owensboro Riverport Authority is required to monitor and record the throughput for the leaded gasoline unloading operation on a monthly basis.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.